CHRONOLOGY

OF THE

392^D MISSILE
TRAINING
SQUADRON

(THOR)

VANDENBERG AFB, CALIF.

CHRONOLOGY OF THE

392D MISSILE TRAINING SQUADRON

(IRBM-THOR)

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HISTORICAL DIVISION
DIRECTORATE OF INFORMATION
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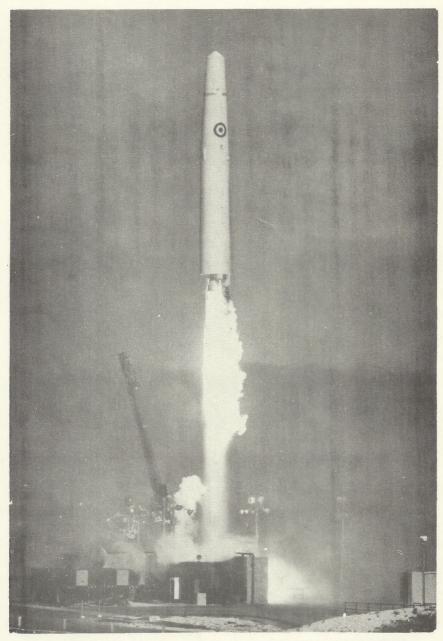
In late November 1955 the Air Force was directed by the Secretary of Defense to initiate a developmental program for an intermediate range ballistic missile. In March 1957, during the Bermuda conference between President Dwight D. Eisenhower and Prime Minister Harold Macmillan, the United States offered to provide intermediate range ballistic missiles to the United Kingdom. The purpose: to bolster the free world's defense of the North Atlantic Treaty area.

Those two events provide the background for the activities of the 392d Missile Training Squadron (IRBM-THOR). Constituted in May 1957, this unique organization during the next several years proceeded to carry out the mission of training itself and then hundreds of Royal Air Force missilemen. The enclosed detailed chronology, compiled by Staff Sergeant Ray A. Hanner, Jr., encompasses not only the major organizational events affecting the Squadron, but also the THOR program itself; a program which, in the words of Air Vice Marshal Walter C. Sheehan, has constituted "the most remarkable project between two countries to come to fruition since the war."

> Carl Berger Command Historian

Carl Berger

1 August 1961



The Royal Air Force launches its 15th THOR IRBM from Vandenberg Air Force Base, 13 December 1960. It was the sixth combat training (proficiency) firing.

CHRONOLOGY OF THE 392D MISSILE TRAINING SQUADRON (IRBM-THOR)

1957

- 23 May
- The 392d Strategic Missile Squadron (Training) was constituted this date. Operational control was to be exercised by the Air Force Ballistic Missile Division, Headquarters, Air Research and Development Command. The Squadron was assigned to the 704th Strategic Missile Wing, also activated 23 May 1957.
- 22 July
- Announcement of reassignment of the 704th Strategic
 Missile Wing and the 392d Strategic Missile Squadron
 (Training) to the 1st Missile Division, Air Research
 2
 and Development Command, effective, 1 August 1957.
- 12 August
- The Squadron was redesignated as the 392d Missile
 Training Squadron following an Air Force decision
 that the term "Strategic" should be reserved for
 units destined to have a direct operational capability commitment.
- 10 September At a training facility conference at Inglewood,
 California, 10-20 September 1957 the Squadron was

^{1.} Hq ARDC GO No. 20, 23 May 57.

^{2.} Hq ARDC GO No. 35, 22 Jul 57.

^{3.} Hq ARDC GO No. 45, 12 Aug 57.

informed its training mission would center on the $$\rm l$$ SM-75 (THOR) missile.

- 15 September The 392d Missile Training Squadron was formally activated at Vandenberg (then Cooke) Air Force

 Base, Lompoc, California. The first commander of the unit, Major Richard A. Plumley, assumed command on this date but continued to work with the Air Force Ballistic Missile Division in Inglewood, California.
- 25 October Major Robert C. Owens was the second commander of the Squadron. He also remained at the Air Force
 Ballistic Missile Division and continued his previous activities with the echelon.
- 13 November One of the first three permanent personnel assigned to the Squadron, Major Charles E. Bruck, assumed command of the unit on this date, vice Major
 Robert C. Owens.

^{1.} Extracts from Training Facility Review Conference Report, 10-20 September 1957, History, 704th Strategic Missile Wing, Jul-Dec 57.
2. Hq ARDC GO No. 44, 2 Aug 57.

^{3. 392}MTS SO No. 1, 15 Sep 57.

^{4. 392}MTS SO No. 3, 25 Oct 57. 5. Hq 1MD GO No. 19, 21 Nov 57.

- 29 November General Thomas D. White, USAF Chief of Staff, announced plans to transfer the 1st Missile Division, and responsibility for developing the initial operational capability, from the Air Research and Development Command to the Strategic Air Command. On this same date General Thomas S. Power, Commander-in-Chief of SAC, named Major General David Wade, his Chief of Staff, to head the 1st Missile Division.
- 11 December The first 392d personnel to undergo training involved a group of five officers and six enlisted men attending an eight week "instructor training" course at Sheppard AFB, Texas.
- 31 December The Air Research and Development Command relinquished control of the 1st Missile Division and its subordinate commands (including the 392d Missile Training Squadron) to the Strategic Air Command, effective 1 January 1958.
- The 392d, four and one-half months after formal 31 December

History, 1MD, (Unclassified), 11 Apr 60, p. 77.

Ltr, Cmdr, 704SMW, 11 Dec 57, History, 704SMW, Jul-Dec 57, p. 14. Hq SAC Rpt, "Progressive Development of SAC 1946-1957", p. 56. 2.

activation, had 14 officers and 16 enlisted per-1 sonnel assigned.

^{1.} Rpt, 704SMW MWP, 31 Dec 57, History, 704SMW, Jul-Dec 57, p. 31.

- l January SAC assumed control of Headquarters, 1st Missile

 * 1

 Division and its subordinate units.
- 5 March Colonel Robert W. Christy assumed command of the 392d vice Major Charles E. Bruck, who assumed duties as Deputy Commander of the Squadron.
- l April Effective this date the 392d Missile Training

 Squadron was further redesignated the 392d Mis2
 sile Training Squadron (IRBM).
- 8 July Following establishment of an RAF liaison office at Vandenberg, the first Royal Air Force officer to be assigned to Vandenberg AFB, Flying Officer Gyril D. Quinton, arrived on base.
- 12 August The first operational SM-75 (THOR) missile arrived at Vandenberg AFB.
- 20 August Forty-seven Royal Air Force (RAF) and 10 USAF

2. Hq SAC GO No. 19, 3 Apr 58.

^{1.} Hq SAC GO No. 1, 2 Jan 58.

^{3.} History, 1MD, (Unclassified), 11 Apr 60, p. 36.

^{*} Redesignated as the 1st Strategic Aerospace Division (effective 21 July 1961), the command controls the activities of three operational ICBM squadrons and supports Air Force polar orbiting satellite launches on the West Coast.

students started interim (non-hardware) Integrated
Weapon System Training under the direction of the
392d instructor personnel. The British represented
the 77th Strategic Missile Squadron (RAF).

16 December

On this date the first THOR intermediate range ballistic missile was successfully launched from Vandenberg AFB by a 392d SAC crew. Members included: Captain Bennie Castillo, Launch Control Officer; Captain John Bon Tempo, Systems Monitor; SMSgt Charles E. Gifford, Launch Monitor Control Officer: MSgt Max L. Meyers, Guidance Alignment Technician; MSgt William L. Hodges, Missile Technician; and MSgt Michael J. Aueri, Missile Technician. Major General David Wade, in a report to General Thomas S. Power on the operation, listed a number of historic "firsts" resulting from the launch. It was, he said: (1) The first ballistic missile fired from Vandenberg westward into the Pacific Missile Range. (2) The first known operation in which new equipment, a new missile, new personnel and a new organization had been successfully integrated. (3) The first completely

^{1.} History, 1MD, Jan-Dec 58, p. 96.

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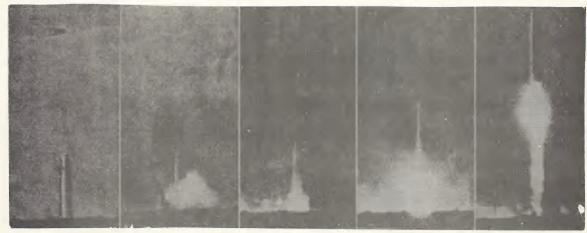
WEDNESDAY MORNING, DECEMBER 17, 1958

88 PAGES

DAILY TOC

LAUNCH THOR MISSIL NEW CAL. BASE

Big Thor Missile Blasts Off to Open West Coast Base



PACIFIC MI SSILE SOAR

First Fired By AF Crew

VANDENBERG AR FORCE BASE (# — An Air Force crew lobbed a combattype Thor missile 1,500 miles westward over the Pacific missile range yesterday. The deadily while dar fluxus has warned its smaller rose slowly from its launch-members would regard as an ing pad all this Strategic Air unfriendly act any decision to Command base. Then gath allow the United States is as upon the company of the compa

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prouching 10,000 mph.

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Thors Fly 1500 Miles Over Sea

U.S. Shows Missile Punch Over Atlantic and Pacific

By FORD CLEERE

VANDENBERG AIR FORCE BASE, Dec. 17—In an awesome display of two-ocean punch, America has rocketed two Thor missiles 1500 miles over the Atlantic and Pacific oceans, landing five miles from

Atlantic and Pacific oceans, landing five miles from the target point.

Ower program Forcer on was a great success, despite to the first point.

One of the 65-foot-long and of the year.

1,0400 M. P. H. Sharmon and the success of the first point point

automatic launch of a fully operational ballistic missile using normal launch procedures. (4) The first ballistic missile to be launched by a Strategic Air Command operational crew.

22 December - As of this date a total of 411 British and American personnel had been trained in the operational aspects of the THOR missile. Of this number, 245 were Royal Air Force crew members. There were 109 crew members in training at the close of 1958, the majority RAF personnel.

^{1.} Ibid., p. 113-114.

^{2.} Ibid., p. 97.

February

- The Division created a THOR Standardization unit within its headquarters and assigned it responsibility "for determining, developing and implementing" a THOR standardization program for the (then active) 704th Strategic Missile Wing. The Wing was further directed to nominate qualified personnel to man the team. In April 1959, because of impending deactivation of the Wing, this team was formally appointed from personnel of the 392d Missile Training Squadron (IRBM).

2 March

USAF personnel entered the first formal (hard-ware-oriented) Integrated Weapon System Training class under the provisions of the THOR missile training program.

31 March

The Squadron was formally relieved from assignment with the 704th Strategic Missile Wing and further assigned to Headquarters, 1st Missile Division, effective 6 April 1959.

^{1.} History, 1MD, Jan-Jun 59, p. 31-32.

^{2.} Ibid., p. 164.

^{3.} Hq 1MD GO No. 13, 31 Mar 59.



Squadron Leader Peter G. Coulson, launch control officer, who fired the first RAF Thor missile from Vandenberg Air Force Base.



Thor being raised into a firing position.

- 9 April THOR missile No. 178 was destroyed on Launch Emplacement No. 2 by a low level explosion, during a captive firing test conducted at Vandenberg AFB.
- During Operation "LIONS ROAR" a THOR missile was successfully fired down the Pacific Missile Range for the first time by an RAF crew. The crew was assigned to the 98th Strategic Missile Squadron (RAF).
- 24 April The first Royal Air Force class to participate in 3
 a THOR launch ("LIONS ROAR") graduated on this date.
- April During April 1959, following a reorganization of
 the Squadron, a Quality Control and Standardization
 Division was created under the Squadron's Weapon
 System Director. This unit's responsibility was to
 conduct periodic standardization checks of maintehance and training personnel.
- 22 May The second formal Integrated Weapon System Training class, with students from the 98th Strategic Missile

^{1.} History, 1MD, Jan-Jun 59, p. 37.
2. Operations Launch Order 300-75-59, "LIONS ROAR", 1MD, 1 Mar 59, p. 2.

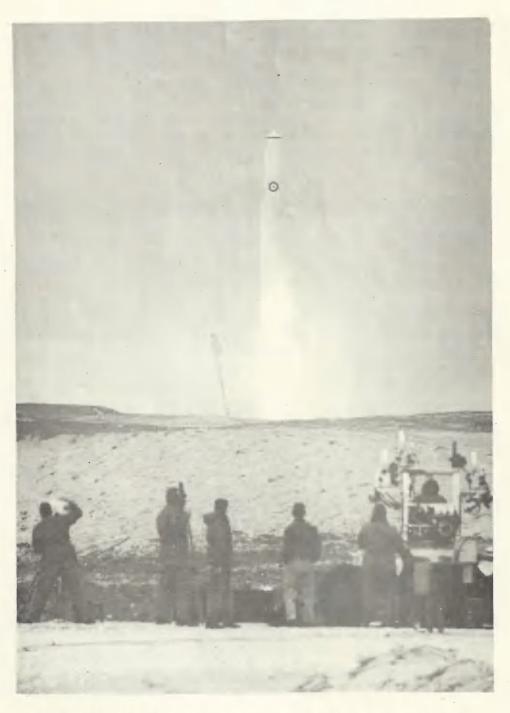
^{3.} History, 1MD, Jan-Jun 59, p. 24. 4. Rpt, 1MD Man., "Organization and Procedures, 392MTS", 1 Jul 59, p. 31.

Squadron graduated on this date. The class was unable to launch a missile because of technical problems.

- 2 June
- Colonel Richard E. Barton assumed command of the 392d Missile Training Squadron (IRBM-THOR) vice Colonel Robert W. Christy.
- 16 June
- A second THOR launched by a Royal Air Force crew failed to program over the ocean as planned, and was destructed at 150,000 feet. The launch was conducted by students in the third THOR Integrated Weapon System Training class, consisting of members of the 98th Strategic Missile Squad-2 ron.
- 16 June
- A "pad toughening" program, instituted prior to
 the 16 June 1959 launch, proved beneficial. A
 preliminary survey of emplacement damage indicated overall damage had been reduced a dramatic
 50 percent from that experienced during the 16
 April launch. This was attributed to pad hardening, removal of accessory equipment prior to

2. Ibid., p. 29.

l. History, 1MD, Jan-Jun 59, p. 28.



LIONS ROAR, the historic first launch of a Thor missile by a crew of the Royal Air Force at Vandenberg, April 16, 1959.

firing, etc.

- l July The 1st Missile Division assumed direct control over squadrons previously assigned to the 704th Strategic Missile Wing.
- 31 July A THOR Reliability Working Group was formed to

 "trouble-shoot" hardware deficiencies in the

 3
 weapon system.
- A third THOR missile was successfully fired from

 Vandenberg AFB by RAF missilemen from the 98th

 Strategic Missile Squadron, supervised by 392d

 li
 instructors.
- Li August A fourth British THOR was launched from Vandenberg as the graduation exercise ending Integrated Weapon System Training for the 98th Strategic Missile Squadron.
- 31 August The 392d published an operations order in support

^{1.} Rpt, "Preliminary Survey of Damage LE-7", 16 Jun 59, DLSM & AMCLO, History, 1MD, Jan-Jun 59, p. 40.

^{2.} History, 1MD, Jan-Jun 59, p. 1-2.

^{3.} Ibid., p. 51. 4. Rpt, "Launch History, 392MTS", History, 1MD, Jan-Jun 59, p. 18. 5. Rpt, OLO 317-75-59, "SHORT SKIP", 10 Jul 59, History, 1MD, Jul-Dec 59.

of the 1st Missile Division Combat Training Launch (CTL) Program. These firings were to be performed by RAF personnel returning to Vandenberg AFB from operational missile units in the United States.

August

Planning proceeded at Division level to transfer the excess THOR launching facilities at Vandenberg to the Air Force Ballistic Missile Division and the Air Materiel Command, for continuing satellite launches and test programs.

The 392d THOR Standardization Team was transferred 17 September to control of the Division on this date. By the end of 1959 it had administered 60 standardization checks to British launch personnel during their fifth and sixth week of training. Students were critiqued on these checks and reports of student failures were forwarded to the Squadron with recommendations for additional corrective training.

17 September - On this date a fifth Royal Air Force THOR missile was fired in a graduation exercise by British

Rpt, 392MTS Operations Order 1-59, 31 Aug 59.

History, 1MD, Jul-Dec 59, p. 44. 2.

Ltr, 1MD to 392MTS, DTS, "Thor Missile Standardization", 31 Aug 3. 59, History, 1MD, Jul-Dec 59, p. 25.

personnel from the lluth Strategic Missile Squadron l (RAF).

September

ing an hour-by-hour and day-by-day schedule of training for each THOR specialist undergoing weapon system training. The plan was patterned after the 392d's Operations Order 1-59 (issued in connection with the first Combat Training Launch, see below) and served to clarify and simplify the scheduling of training.

6 October

The first Combat Training (proficiency) Launch to be conducted by Royal Air Force missilemen returning to Vandenberg AFB was highly successful. Operation "FOREIGN TRAVEL" was conducted this date by British missilemen representing the 77th Strategic Missile Squadron (RAF), a unit that had not previously fired a missile.

21 October

- A seventh THOR missile was launched by a Royal
Air Force crew from the lighth Strategic Missile

^{1.} History, 1MD, Jul-Dec 59, p. 30-31.

^{2.} Rpt, Tng Div, "Monthly Missile Progress Summary", 31 Oct 59,

History, 1MD, Jul-Dec 59, p. 31.
3. History, 1MD, Jul-Dec 59, p. 31.

Squadron (RAF).

- 12 November Royal Air Force missilemen from the 144th Strategic Missile Squadron successfully launched an eighth THOR missile (Operation "BEACH BUGGY")

 2
 from Vandenberg AFB.
- 16 November The 392d Missile Training Squadron issued a maintenance plan (334-59), pertaining to "timely and programmed calibrations and periodic inspections of missile ground support 3 equipment."
- The first night launch from Vandenberg occurred during Operation "HARD RIGHT", the second
 launch in the CTL series. The missile was
 fired by a crew representing the 97th Strategic
 Missile Squadron, another British unit which
 had not previously fired a missile.
- 14 December During the second night launching by the Royal

 Air Force, the THOR missile disintegrated shortly

4. History, LMD, Jul-Dec 59, p. 34.

^{1.} Ibid., p. 34.

^{2.} Ibid. 3. Rpt, 392MTS Maintenance Plan 334-59, 16 Nov 59, p. 2.

after liftoff due to a materiel failure. This was the final launch of 1959 and the tenth THOR to be fired by British crew members. This launch was performed by personnel of the 144th Strategic Missile Squadron.

25 December - Lieutenant Colonel John F. Watters assumed command of the 392d Missile Training Squadron (IRBM-THOR) vice Colonel Richard E. Barton. 21 January

The eleventh Royal Air Force launch of a THOR missile from Vandenberg AFB marked the end of the original training program. At a graduation ceremony held at the base theater after the successful exercise, the Royal Air Force presented a trophy to Major General David Wade, Commander, 1st Missile Division in token of "esteem and appreciation for all the United States Air Force has done for us." General Wade, in closing remarks to this last graduating class, reviewed for his audience the "vital importance to our governments" of what had been accomplished and the "tremendous increase in deterrent power which is now being supplied around the clock by Vandenberg-trained Royal Air Force crews manning the operational THOR squadrons in the United Kingdom." He said: "This program has also yielded a direct, military dividend of historic importance. The training and operational procedwres that have been developed, applied and tested in this program, have produced the free world's first operational system of ballistic missile bases. Much of the knowledge and experience we have gained in this undertaking will help us





HARD RIGHT -- the first night launch from Vandenberg, 1 December 1959.

accelerate the expansion of our intercontinental ballistic missile capability in the United States."

29 January Following discussions with Air Force Ballistic Missile Division and San Bernardino Air Materiel Area representatives, a transfer agreement for three THOR launch emplacements and support facilities was signed this date.

January During the seventeen month period between September 1958 and January 1960, some 1,154 Royal Air Force personnel were trained at Vandenberg by the 392d Missile Training Squadron (IRBM-THOR). With completion of the original training program, planning was initiated for a partial phase-down of the Squadron.

1-2 February - A CTL conference was held at Vandenberg AFB, with representatives from the Royal Air Force in attendance, to develop a final plan covering the remaining Combat Training Launches from Vandenberg.

History, 1MD, Jan-Jun 60, p. 101-102.
Rpt, 1MD/AMC "Memorandum of Agreement", History, 1MD, Jan-Jun 60, 2. p. 120.

^{1.} Graduation speech, "SAC Missileer", Base Newspaper, 22 Jan 60,

History, 1MD, Jul-Dec 59, p. 37, Jan-Jun 60, p. 99. TWX, 1MD to 7AD, 4 Jan 60, History, 1MD, Jan-Jun 60, p. 104.

15 February - The Squadron strength at this date was 243.

- 2 March The Royal Air Force launched its twelfth THOR

 from Vandenberg AFB, and the third in the series

 of Combat Training Launches.
- 22 March = The THOR Standardization Team was returned to control of the Squadron to continue checks of CTL crews from the Royal Air Force.
- 8 May Work began on the fourth Combat Training Launch, scheduled for June. The exercise involved the first missile rotated from the United Kingdom which, accompanied by an advanced party of Royal Air Force personnel, arrived on this date.
- 20 May

 Arrival of the main CTL group representing the
 98th Strategic Missile Squadron, headed by Squadron Leader Peter G. Coulson (the launch control
 officer who fired the first Royal Air Force THOR
 missile from Vandenberg 16 April 1959).

5. Ibid.

^{1.} Rpt, "Base Population Report", 15 Feb 60.

History, 1MD, Jan-Jun 60, p. 108.
 Ltr, 1MD to 392MTS, "Thor Standardization", 22 Mar 60, DXIH Files.

^{4.} History, 1MD, Jan-Jun 60, p. 109.

22 June - The fourth Combat Training Launch was successfully accomplished this date.

22 June - The fourth CTL was critiqued at a Combat Training

Launch Conference held at Vandenberg in connection

with it. In attendance, besides British personnel,

were SAC, 1st Missile Division, 7th Air Division,

2

and San Bernardino Air Materiel Area officials.

Personnel from the Hemswell Complex in the United

Kingdom officially initiated the fifth Combat Train—

ing Launch exercise with the arrival of the missile

and advanced party. This missile, the second to be

rotated from the United Kingdom to Vandenberg, had

been assigned to the 97th Strategic Missile Squad—

3

ron (RAF).

Li September - An RAF crew began formal standardization examinations with the missile including conduct of a
double propellant flow; similar exercises were actomplished by two other crews on succeeding days.

4. Ibid., p. 130.

^{1.} Ibid.

Ibid., p. 111.
 History, 1MD, Jul-Dec 60, p. 127.



A THOR is raised into firing position at Vandenberg AFB in preparation for a Royal Air Force combat training launch exercise.



- 11 October The fifth CTL was successfully conducted by a crew from the 144th Strategic Missile Squadron, monitored by the 392d Missile Training Squadron.
- 16 October The sixth Combat Training Launch period began on this date with the arrival from Britain of another THOR missile, assigned to the lighth Strategic Missile Squadron. This missile was accompanied by an advance party of four Royal Air Force personnel.
- The 392d published an evaluation report of the above CTL. In summing up the operation it stated that "from the standpoint of an over-all evaluation the launch was considered a highly successful exercise. It clearly demonstrated the ability of the Royal Air Force to process and launch one of their missiles at Vandenberg AFB which had been subject to field conditions in the United Kingdom."

 It was also considered as a further demonstration of the basic reliability of the THOR weapon system.

^{1.} Ibid., p. 133.

Rpt, "392MTS Evaluation - Operation 'LEFT RUDDER'", 18 Oct 60, p. 76.

November

- In early November the main party of 47 Royal Air
Force personnel arrived for the next Combat Training exercise.

9 November

A standardization missile was prepared to a double propellant flow configuration at Launch Emplacement No. 7 and formal standardization checks began by Crew No. 1 on this date. A second, third and fourth crew was checked out on the 10th, 14th 2 and 15th of the month.

15 November

- The 392d's personnel strength at this time stood at 78 (against an authorized strength of 71 individuals).

13 December

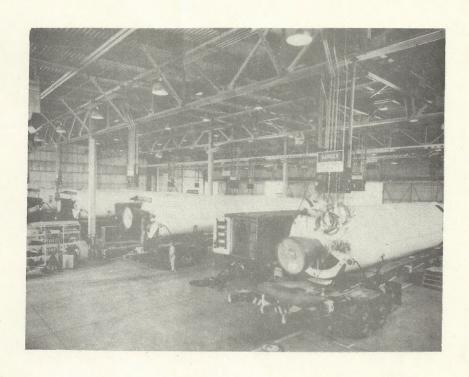
- Royal Air Force missilemen from the 144th Strategic Missile Squadron successfully launched the sixth Combat Training Launch missile over the Pacific Missile Range on this date. It was the fifteenth THOR missile launched by the British since 4 April 1959.

2. Ibid., p. 134.

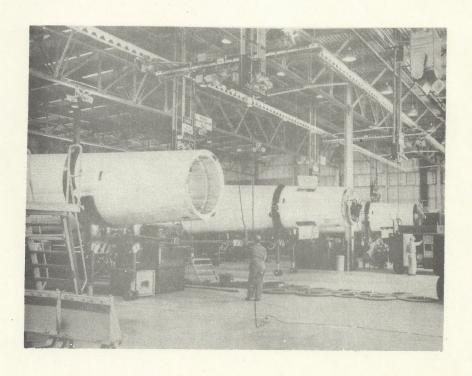
3. Rpt, "Base Population Report", 15 Nov 60.

^{1.} History, 1MD, Jul-Dec 60, p. 133.

^{4.} TWX, 1MD to SAC, DMMB2 17540, 16 Dec 60, History, 1MD, Jul-Dec 60, p. 134.



Thors being prepared in the missile assembly and maintenance shop at Vandenberg Air Force Base.



16 January

implement the 1st Missile Division Operations

Launch Plan. The 392d's plan outlined the detailed activities of Combat Training Launch personnel from the time of their arrival at Vandenberg up to and including the completion of post launch activities.

6 February

An advanced Royal Air Force party for the seventh Combat Training Launch exercise (scheduled for 28 March) arrived with their missile at Vandenberg AFB. The missile was the fourth to be rotated from Britain.

21 February

The main party arrived from Driffield Complex in the United Kingdom.

29 March

The seventh Combat Training Launch missile was successfully fired by the Royal Air Force missilemen on this date.

^{3.} Ibid., p. 19. 4. Ibid., p. 55-56.

- 24 April The advanced party for the eighth Combat Training
 Launch arrived at Vandenberg.
- 17 May The main Royal Air Force party arrived to prepare their missile in accordance with the programmed 2

 June launch date.
- 20 June An RAF crew from the 130th Strategic Missile

 Squadron successfully fired the seventeenth THOR

 (eighth Combat Training Launch) from Vandenberg

 3
 AFB.
- 3 July The 392d, in an evaluation report pertaining to

 the eighth Combat Training Launch exercise, summed

 up the operation as: "successful in every aspect."

^{1.} Rpt, Hq 1MD, "Evaluation Report - Operation 'WHITE BISHOP'", 3 Jul 61, p. 9.

^{2.} Ibid., p. 35.

^{3.} Ibid., p. 49.

^{4.} Ibid., p. l.